DOCUMENT RESUME

ED 248 492 CS 007 787

AUTHOR Bradtmueller, Weldon G.; Egan, James B.
TITLE To Question or Not to Question: That Seems to Be the Question.
PUB DATE Oct 83
NOTE 11p.; Paper presented at the Annual Meeting of the Great Lakes Regional Conference of the International Reading Association (Springfield, IL, October 5-8, 1983).
PUB TYPE Information Analyses (070) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Classroom Communication; *Educational Research; Elementary Secondary Education; *Questioning Techniques; Reading Comprehension; Reading Instruction; *Teacher Role; Teacher Student Relationship; *Teaching Methods
IDENTIFIERS *Theory Practice Relationship

ABSTRACT

Research on the effects of questioning in the classroom has explored the placement, timing, type, and social impact of questions. Principles of good questioning include the following: (1) well-stated questions should be concise, clear, and complete; (2) questions should be topical in nature, requiring a complex answer; (3) yes or no questions should be avoided; (4) leading questions should be used sparingly; and (5) elliptical or "fill in the blank" questions should be avoided. Several studies indicate that while some questions before reading are appropriate and desirable, questioning before reading can limit what the less able reader comprehends, although the opposite seems to be the case with good and more mature readers. The time and manner in which questions are asked may be the determining factor in a successful or unsuccessful discussion session. Generally, questions that can be answered in a variety of ways seem less threatening to students than do those with only one right answer. One study indicates that teachers use fact questions more often than any other kind. Other studies make the observation that questions may both lead a reader to better learning and understanding and lead them astray. Questions can be used in various ways and can have positive or negative effects depending upon the teacher and what the teacher is attempting to accomplish rather than upon the technique used. A differentiation must be made between the use of questions for assessment and for fomenting discussion. (HTH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED248492

Weldon G. Bradtmueller
James B. Egan

To Question or not to Question: That Seems to be the Question

Questions seem to be part of the very essence of leading children to learning in the usual classroom teaching-learning situation. Here the teacher has the responsibility of setting the stage so that learning can and does take place. Recalling the Socratic method from ancient history, the Catechetical approach from the last century, and the inductive questioning approach of Suchman, called the Inquiry method, in science education during the last 20 years may help us to realize this is neither a new idea or one that will disappear with time. Today we have schema theory and story grammar which are also resurrected from the past, given new names, but still are effective bases for questioning techniques.

Dr. Egan's question: "Do questioning techniques have an effect on student comprehension"[2] must be answered resoundingly in the affirmative. Let us look at some of the research regarding questioning for various purposes:

1. Placement of questions
2. Timing of questions
3. Social impact of questions
4. Type of questions
   a. Assessment
   b. Developmental background content
   c. Fomenting discussion of content

Before we discuss the research let us quickly review principles of good questioning. Hunkins(14), Sanders(25), O'dell(21), all give lists of these. I will use Odell's list here as it is in concise and explicit language(21).

1. Well stated questions should be concise, clear, complete.
2. Questions should be topical in nature, requiring a complex answer.
3. Yes/no questions should be avoided.
4. Leading questions should be used sparingly.
5. Elliptical, or "fill in the missing word," questions should be avoided.

Let's look at the first of these: Placement of questions.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Weldon G. Bradtmueller

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☒ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

CS007187

Should we ask questions before students read a story selection, chapter or book? According to some research the answer would seem to be, "no." The point is made that questions asked before reading may limit the reader in what he comprehends, He may read to find only the answer to that question and ignore everything else. This seems to be the case with poor middle grade readers. But the opposite seems to be the case with good readers and more mature readers. Moore, Readance, and Rickelman(21) point out in their monograph that questions help and lead students to learn, to stimulate curiosity about the material to be read, help bring to conscious memory what the student already knows, makes possible the application of prior knowledge to the situation presented, foster anticipation of what may come next, and focus attention on specific information.

Memory(19), in his article, "Written Questions as Reading Aids in the Middle Grades: A Review of Research," reviewed 80 articles related to questioning research and found 31 that fit his criteria for analysis. One of his conclusions was that adjunct questions massed before reading a selection rarely enhance learning of the stated information.

It would therefore seem that some questions before reading are appropriate and desireable. This is especially true if you wish the class to obtain a specific bit of information. But, if you wish them to apply this information or use information presented in the text, further questioning seems necessary.

Memory's(19) study had one other conclusion that deals with placement of questions, i.e., Interspersed literal questions can enhance the learning of directly stated information to which those questions refer. This would seem to indicate that questions should be asked before reading, during reading, and after reading. The most appropriate placement may depend to a great extent on the content being taught, the purpose for teaching it, the background

of the children and their ability to handle abstract constructs. For, as Anderson and Biddle note - questions regarding certain information call attention to that information and therefore facilitate recall of all type of material associated with that type of question. A caution is also noted, too many interspersed questions, especially those that would lead thinking away from the main purpose for reading, often hinders recall and comprehension. The third and final conclusion from Memory's(19) study, that higher level adjunct questions enhance learning only by students who can understand and answer those questions, raises an important consideration in the placement of questions: What hierarchy if any should one follow in the asking of questions? Daniels and Mason(6) in their chapter on "Comprehension" in the monograph Corrective Reading in the Elementary Classroom., proposed the notion that fact question should precede inference type question as the drawing of inferences is dependent on having the facts in mind. Taba(28) in her research on Children's thinking pointed out that moving upward too fast in the questioning hierarchy could lead to cognitive overload and cause the children's brains to go "tilt" and lead to an almost total loss of reasoning within the subject or topic you are attempting to teach. In many instances you may as well give up at that time and come back later to reteach what you had been attempting. Sometimes moving backward in the hierarchical structure to a lower level of questioning will bring the class back into the logical sequence you are attempting to develop and permit a continuation and further progress up the hierarchy of the questioning continuum. Crowell and Au(5) demonstrated this in their article on "Using a Scale of Questions to Improve Listening Comprehension" and then relate it to reading.

Durkin(7) in her analysis of the research on the placement of questions in the instructional sequence came to the following conclusions:

1. Questions posed before a passage is read increase what is learned about content that relates to the questions.

2. Questions placed after the relevant passage increase what is learned about content that relates to them and, in addition, increases what is learned about different content.

Timing of questions, very closely related to placement, comes next. Farrar(8) in her article in the Jan. 1983 Reading Teacher notes that the asking of questions is a means of negotiating power. This flows over into the third area of the social impact of questions. Asking questions is a means of controlling interactions. Who is asked what, when, where, and how can lead to support, criticism, motivation or the stopping of motivation, joy, tears, etc. The time and manner in which questions are asked may be the determining factor in a successful or unsuccessful discussion session.

A question demands a response and is threatening to those who do not know the answer. A question may also be an instrument of mutuality in that the student who knows the answer complies with the command to respond, does so, and this may lead to a feeling of togetherness which counteracts the threatening aspects of questioning.

Teachers may encourage mutuality enhancement by asking indirect questions or those that do not just require a "yes" or "no" answer, but require a "why" or "why not" to follow. Or, rephrasing a "why" to "how do you know that" type of question seems less threatening.

Generally, questions that can be answered in a variety of ways seem less threatening than those with only one answer. But for the child who has only been exposed to literal, fact type questions or who does not comprehend what the teacher is getting at, the question with several possible answers poses another type of threat and then is no longer a mutuality enhancer.

Types of questions, the last consideration about questions and research, in our presentation contains some interesting facts. Guszak, in 1966-67 classified teachers questions into six categories and found they utilized these percentages of the time:

1. Recognition 13.5%
2. Recall 56.9%
3. Translation 0.6%
4. Conjecture 6.5%
5. Explanation 7.2%
6. Evaluation 15.3%

His conclusion was that teachers use fact questions more often than any other kind.

Ruddell(23) used seven types of questions based on Taba's(28) questioning strategy as a means of recommending differentiation of instruction. These were:

1. Translation
2. Interpretation
3. Application
4. Analysis
5. Synthesis
6. Evaluation

Harris and Sipay(12) listed the following types of questions often used by teachers and found in basal series. You may note that these questions utilize a literary base and not a cognitive base as to type of classification.

1. Main idea questions
2. Note and recall details questions
3. Specific fact questions
4. Sequence of events questions

5. Following printed directions questions
6. Finding author's plan questions
7. Critical reading questions

Nancy Marshall(18) in the March 1983 Reading Teacher lists questions to use in finding story grammars. These questions are universal in nature and were derived from the research of Mandler and Johnson(17), Rumelhart(24), Stein and Glenn(27), and Thorndyke(29). They have been shown to be effective in evaluating student comprehension and use of this technique has led to improved story comprehension. (Stein and Glenn(27), Rumelhart(24), Mandler and Johnson(17).)

Durkin(7) in the Jan. 1981 issue of Language Arts discusses the general area of research on comprehension and specifically question types as well as questioning techniques. She lists questions as being:

1. "A means for understanding information processing." These questions involve both placement and timing and generally all lead to improved comprehension.
2. "A means for augumenting what is learned." These questions again involve both placement and timing and also resulted in increased comprehension.

She further lists the following implications of the research on questioning for instructional programs:

1. We should reject statements that encourage us not to ask questions for children to answer before they read.
2. Most research suggest that questions, regardless of placement, do foster learning. Therefore presenting questions to children seems to be one means of improving comprehension.

Frase(9) made the observation that questions may both lead a reader to better learning and understanding as well as lead them astray. Questions can

be used in various ways and can have the positive and/or negative effect as was stated. It is seemingly more dependent on the teacher and what the teacher is attempting to accomplish than upon the technique utilized. A differentiation must be made between the use of questions for assessment or the fomenting of discussion. Too much use of any one kind of question leads students into one type or style of thought. Then the introduction of a different type of question may confuse the students until they learn how to deal with the variant thought processes. The opposite extreme is also a problem. For if a teacher asks too many different types and kinds of questions without establishing a rationale for the questioning, this often leads to confusion and little comprehension. Too many questions of one kind seems to lead to narrow, limiting thought processes, while too many different kinds of questions too fast leads to confusion and the suppression of comprehension.

Questions can be used in various ways as is pointed out by Guthrie(11), Lapp and Flood(16), Durkin(7) and many others. Durkin(7) makes the distinction between assessment type questions and discussion type questions. Taba(28), Sanders(25), Hunkins(14), Weigand(31) and others note the value of using hierarchies of questions that may be asked and even list the order in which one might present these questions to a group of children. Guthrie(11) in his discussion of the use of questions as tools for teaching notes that if a student cannot answer a question he has been asked, he probably shouldn't have been asked it in the first place. Since, being asked a question to which you do not know the answer in no way improves your comprehension. Conversly, if you are asked a question to which you do know the answer, this also does not improve your comprehension as you already know it. But, the other consideration of question usage, as a means of fomenting discussion, seems the major reason for using questions and asking questions as an instructional device.

1. Anderson, R. C., and Biddle, W. B., "On Asking Questions About What They Are Reading." In G. H. Bower, ed., The Psychology of Learning and Motivation (Vol. 9) Academic Press, N.Y., 1975.

2. Bloom, Benjamin S., (Ed) Taxonomy of Educational Objectives, Handbook I: Cognitive Domain, David McKay, N.Y., 1956

3. Burmeister, Lou E., Foundations and Strategies for Teaching Children to Read, Addison-Wesley Publishing Co., Reading, Mass., 1983.

4. Crafton, Linda K., "Comprehension Before, During, and After Reading," The Reading Teacher 36: 293-297, Dec., 1982.

5. Crowell, Doris and Au, Kathryn, "Using a Scale of Questions to improve Listening Comprehension," Language Arts 56: 38-43, Jan., 1979.

6. Daniels, Paul R., and Mason, G. E. "Comprehension" as found in Corrective Reading in the Elementary Classroom, Johnson and Siddon, eds., International Reading Association, Newark, Del., 1967, Chap. 9.

7. Durkin, Dolores, "What is the Value of the New Interest in Reading Comprehension?" Language Arts 58: 23-43, Jan., 1981.

8. Farrar, Mary T., "Another Look at Oral Questions for Comprehension," The Reading Teacher 36: 370-375, Jan., 1983.

9. Frase, L. T., "Purpose in Reading," in Cognition Curriculum, and Comprehension, J. T. Guthrie, ed., International Reading, Association, Newark, Del., 1977.

10. Guszak, Frank J., "Teacher Questioning and Reading," The Reading Teacher 21:227-224, Dec., 1967.

11. Guthrie, John T., "Questions as Teaching Tools," Journal of Reading 26:478-479, Feb., 1983.

12. Harris and Sipay, How to Increase Reading Ability, Longman, 7th ed., N.Y., 1980.

13. Hittelman, Daniel R., Developmental Reading, K-8, Houghton-Mifflin, Boston, 1983 2nd Ed.

14. Hunkins, Francis P., Questioning Strategies and Techniques, Allyn and Bacon, Boston, 1972.

15. Hunkins, Francis P., Involving Students in Questioning, Allyn and Bacon, Boston, 1976.

16. Lapp, Diane, and Flood, James, Teaching Reading to Every Child, Macmillan, N.Y., 1978, pp. 302-317.

17. Mandler, Jean M. and Johnson, Nancy S., "Remembrance of Things Passed: Story Structure and Recall," Cognitive Psychology 9: 111-157, Jan., 1977.

18. Marshall, Nancy, "Using Story Grammar to Assess Reading Comprehension," The Reading Teacher 36: 616-625, Mar., 1983.

19. Memory, David M., "Written Questions as Reading Aids in the Middle Grades: A Review of Research," New Inquiries in Reading: Research and Instruction 31st Yearbook of the National Reading Conference, Jerome A. Niles, ed., 1982. pp. 71-76.

20. Moore, David W., Readence, J. E., and Rickelman, R. J., Prereading Activities for Content Area Reading and Learning, International Reading Association, 800 Barksdale Rd., Newark, Delaware, 1982. Ch. 2.

21. Odell, Charles W., "The Use of Question in Classroom Instruction," University of Illinois Bulletin, Vol. 22: 3-18, Sept. 29, 1974.

22. Ruddell, Robert B., "Early Prediction of Reading Success: Profiles of Good and Poor Readers," in M. L. Kamil and A. J. Moes, eds. Reading Research: Studies and Applications 28th Yearbook National Reading Conference, Climson, S.C., National Reading Conference, 1979, pp. 150-158.

23. Rumelhart, D. E., Toward an Interactive Model of Reading Center for Human Information Processing, University of California, San Diego, March, 1976.

24. Sanders, Norris, Classroom Questions: What Kinds? Harper and Row, N.Y., 1966.

25. Sanger, H. "Active Comprehension: From Answering to Asking Questions," The Reading Teacher 31: 901-908, 1978.

26. Stein, N. L., and Glenn, C. G. "An Analysis of Story Comprehension in Elementary School Children," in New Direction in Discourse Processing Vol. 2 R. R. Fredle, ed., Hillsdale, N.J., Erlbaum, 1979.

27. Taba, H., Levine and Elzey, Thinking in Elementary School Children, Coop. Res. Prof., No. 1574, San Francisco St. Coll., April, 1964.

28. Thorndyke, Perry W., "Cognitive Structures in Comprehension and Memory of Narrative Discourse," Cognitive Psychology 9: 77-110, Jan. 1977.

29. Tonjes, Marion J., and Zintz, Miles V., Teaching Reading/Thinking/Study Skills in Content Classrooms, Wm. C. Brown Co., Dubuque, IA., 1981.

30. Wiegand, James E., (ed.), Developing Teacher Competencies, Prentice-Hall, Englewood Cliffs, N.J., 1971. Ch.3.

31. Wolfe, W. King, M. L. and Huck, C. S., "Teaching Critical Reading to Elementary School Children," Reading Research Quarterly 3: 435-498, 1968.